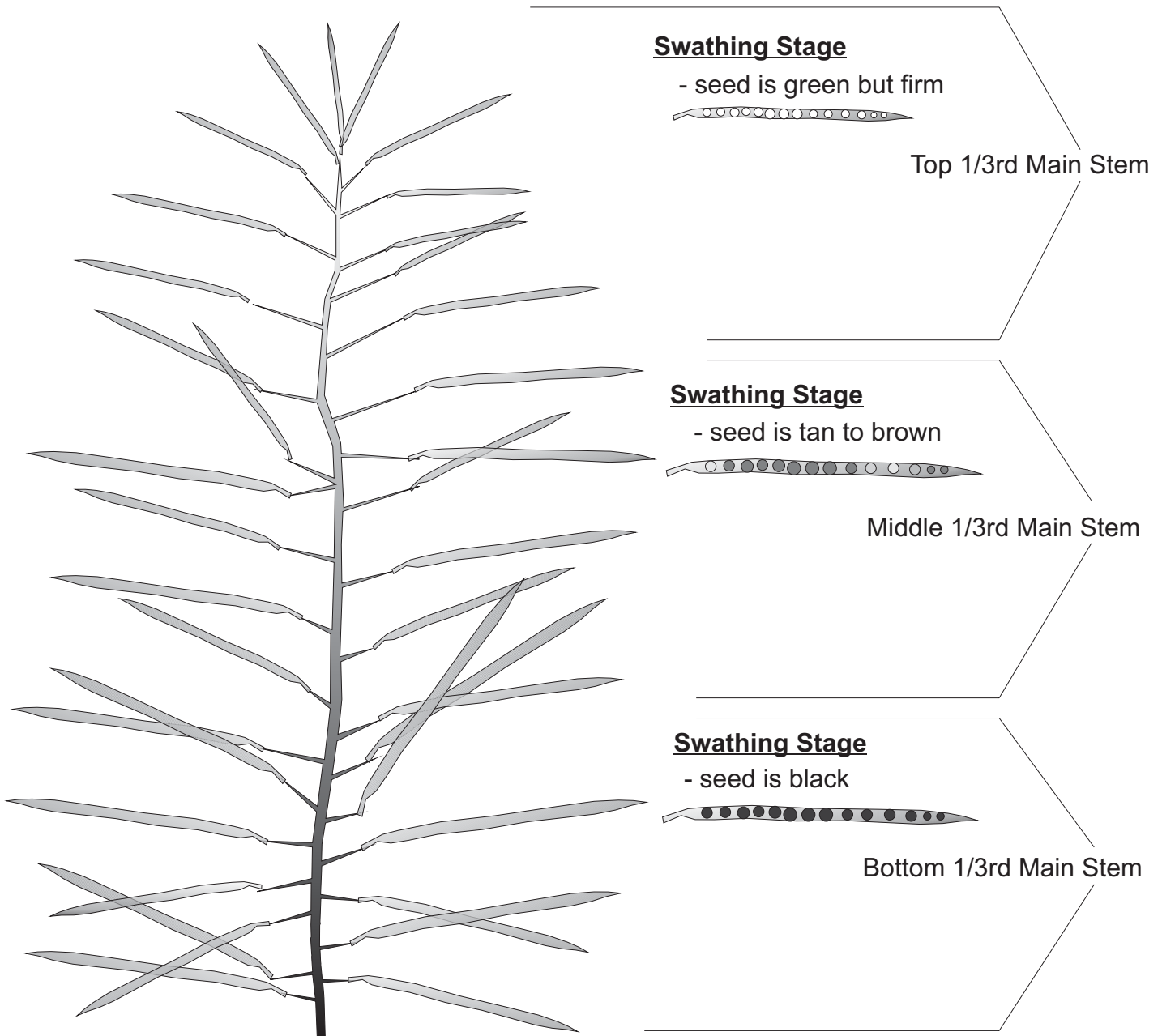


# Definition of Canola Maturity Used In This Report

Please check with the *Canola Council of Canada* for complete definition of “swathing maturity”. It is this “ready for swathing” time period that is used here to describe “maturity”.

It is very important to split pods and check the seed inside as outer pod colour does not reflect the true maturity of the plant. Often the outer pod colour can still be green while seed inside has turned to black. Other times the pod colour could be pale yellow while green seed is within. One field inspection is not enough, one must visit a particular field several times to catch a progression in maturity so as not to miss the safe swathing period. Cool wet weather periods can slow or even temporarily halt the progression of maturity, especially prior to swathing. Several portions of the same field per variety must be checked as well because often minor field variations can change maturity across a given field.



## Pests of Peace River Region Canola

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Perhaps the worst current “pest” threat to canola in the BC Peace isn’t a “bug” at all, but a fungus: clubroot is a canola disease that could seriously reduce the ability of BC Peace region farms to grow the crop. It is present in hundreds of fields in Alberta: the closest known infested fields are in the Edmonton area, but clubroot could easily be transferred from there to here, with a little bit of soil. Check out the problem on the Internet: Alberta Clubroot Management Plan [http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex11519](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex11519) Also see links at the bottom of that document, to a disease fact sheet and Best Management Practices for Disinfesting Farm Machinery and Equipment to Prevent the Spread of Clubroot.

Another big threat (also not a bug) to BC Peace agriculture is a group of weed species that until last year were absent, and will still not often be seen: the hawkweeds. They have flowers and seeds like dandelions, but they are also perennial and displace other vegetation by creeping along the soil surface. Orange hawkweed is most distinctive, but there are also yellow species that at a glance may look like relatively harmless hawksbeard. Get more information at [www.weedsbc.ca](http://www.weedsbc.ca) or ask for a poster at the BC MAL office. The NorthEast Invasive Plant Committee with your help is working hard to keep these and other species out of the region.

The BC Peace region is not an especially bad place for insect damage to canola crops, but since insecticide treatments can make the difference between a positive and a negative financial margin, and untreated insect pests in a particular year can be even more costly, it is worth knowing the players and the risks. Further information is available from agriculture service suppliers (id. booklets), on websites such as Canola Council [http://www.canola-council.org/canola\\_watch.aspx](http://www.canola-council.org/canola_watch.aspx), and at other websites mentioned below.

Below are brief discussions of five insect pests that have caused significant damage in the past: flea beetles, cut worms, lygus bugs, Bertha armyworm and diamondback moth.

**Flea beetles:** at the emergence to cotyledon crop stage, high beetle populations can move from last year’s fields and gradually add damage to a slower emerging crop when the weather is dry or cool and seed treatments have worn off from early seeding, or a switch to warm weather can make the beetles active and destroy a crop in a day or two. While there is always some flea beetle damage, plants in good growing conditions can quickly outgrow damage that is below the economic threshold. Canola seedlings can withstand 50 % leaf loss, but a decision to treat should be made when damage approaches 25 % of the leaf surface. Checking the intensity of beetles on early weeds or volunteer canola more developed than the crop can give a warning of crop damage to come.

**Cut worms:** are less common than flea beetles and cause damage only in fields where they were last fall. Each plant fed on is killed, so plants up to a few leaves can disappear in patches.

**Lygus bugs:** do their greatest damage to buds or developing pods. Healthy plants with moisture can compensate for damage, but high populations damaging plants before bolting may be worth treatment. A sweep net and threshold numbers (see Crop Watch reports) could help make a valid treatment decision.

**Bertha armyworm and diamond back moth** caterpillars feed on canola leaves and in certain years can destroy crops. Bertha populations result from last year’s population in the same area, so it could be valuable to be aware of monitoring from the previous summer, if it indicates some developing possible “hot spots” in the Peace (2008 was not a bad year for Bertha armyworm). Diamondback moths arrive on the wind in Canada each spring, so are not related to last year’s population. Fact sheets for both these species are available at the website: <http://www.agf.gov.bc.ca/cropprot/forecastmaps.htm>

Contact the BC Agriculture office if you would like to be involved in monitoring for these pests.  
[Kerry.clark@gov.bc.ca](mailto:Kerry.clark@gov.bc.ca) *Crop Protection Specialist*

Argentine Canola		Yield as % of 45H21								
		Dawson Creek			Fort St. John			B.C. Peace		
Variety	Type	2008**	2004-2007		2008	2004-2008		2008	2004-2008	
		% of check	Avg. (%)	Stn. Yrs.	% of check	Avg. (%)	Stn. Yrs.	Avg. (%)	Avg. (%)	Stn. Yrs.
4414 RR	Roundup Ready®		105	[1]	105	103	[2]	105	103	[3]
4424 RR *	Roundup Ready®				119	119	[1]	119	119	[1]
4434 RR *	Roundup Ready®				103	103	[1]	103	103	[1]
<b>45H21</b>	<b>Roundup Ready®</b>		<b>100</b>	<b>[3]</b>	<b>100</b>	<b>100</b>	<b>[5]</b>	<b>100</b>	<b>100</b>	<b>[8]</b>
46P50	Roundup Ready®		127	[1]	121	119	[3]	121	121	[4]
997 RR	Roundup Ready®		96	[1]	100	95	[3]	100	95	[4]
D3150 *	Roundup Ready®				113	113	[1]	113	113	[1]
D3151 *	Roundup Ready®				101	101	[1]	101	101	[1]
Rugby	Roundup Ready®		115	[1]	100	103	[2]	100	107	[3]
v1037	Roundup Ready®				96	96	[1]	96	96	[1]
5020	LibertyLink®		113	[3]	123	108	[5]	123	110	[8]
5030	LibertyLink®		117	[3]	108	108	[5]	108	111	[8]
5440	LibertyLink®		120	[1]	127	123	[2]	127	122	[3]
45P70	Clearfield®		110	[1]	106	108	[3]	106	108	[4]
5505 CL *	Clearfield®				120	120	[1]	120	120	[1]

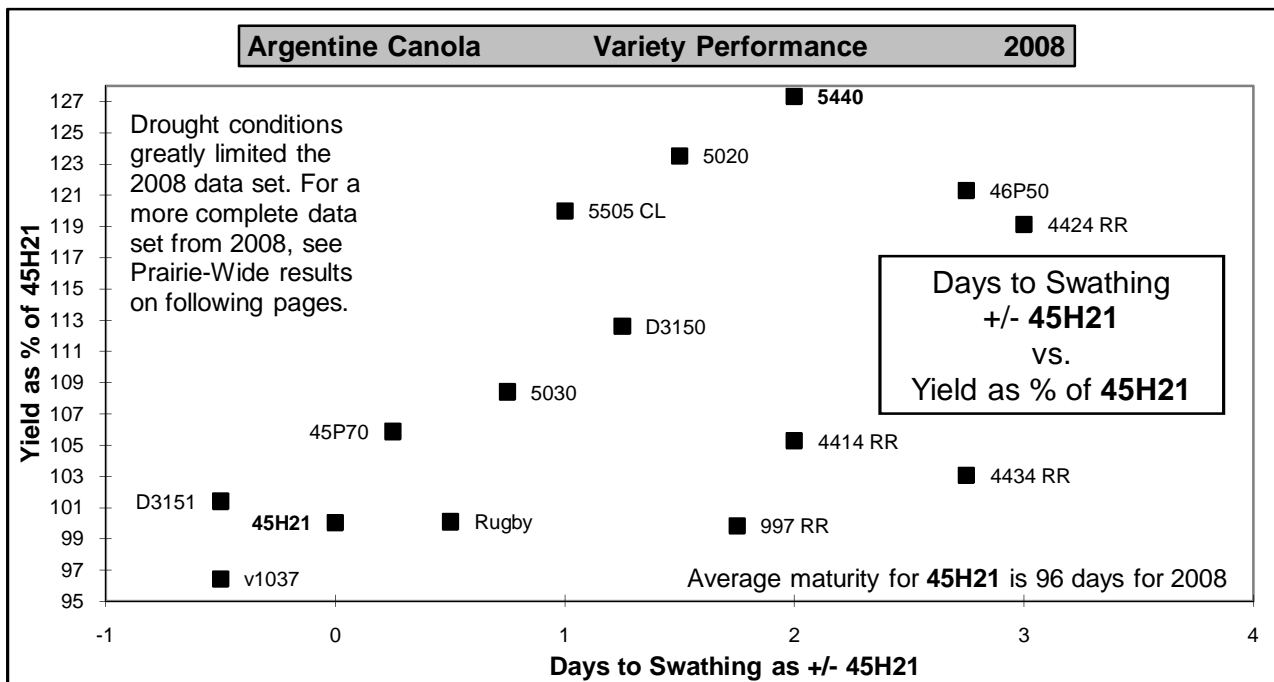
**45H21 - check variety**

\* caution, first year tested and or very limited data available

\*\*No 2008 data for Dawson Creek site due to drought

Roundup Ready® is a registered trademark of Monsanto Canada Inc.  
 LibertyLink® is a registered trademark of Bayer CropScience  
 Clearfield® is a registered trademark of BASF

**Note:** "System Varieties" (Clearfield®, Roundup Ready®, or LibertyLink®) are grown together in with "conventional" Argentine varieties (actually as three napus trials with a common check per site) and thus, conventional herbicides are used for weed control. (See page 6 for herbicides used). The three trials are usually combined to produce the chart above but that means statistical analysis cannot be shown for the entire group. Coefficient of Variance (CV) values of the napus trials for 2008 were as follows: FSJ = 12.15



**Note:** Above graph depicts limited data from FSJ. All other 2008 canola data grown at either DC or FSJ proved to be too variable for use due to the severe drought conditions at both FSJ and DC sites in 2008. For further 2008 canola data, please see data on page 25 & 26 produced from other short-season sites.

Argentine Canola					Variety Descriptions		
Variety	Type	Herbicide Tolerance	B.C. Peace Avg.		Alberta Agdex	Canada Blackleg Rating	Distributor
			Days to Swathing <sup>1</sup> as +/- check	2008	2004-2008		
4414 RR	HYB	Roundup Ready®	2	2	0	R	Brett-Young
4424 RR *	HYB	Roundup Ready®	3	3	0	MR	Brett-Young
4434 RR *	HYB	Roundup Ready®	3	3	0	MR	Brett-Young
<b>45H21</b>	<b>HYB</b>	<b>Roundup Ready®</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>R</b>	<b>Pioneer Hi-Bred</b>
46P50	HYB	Roundup Ready®	3	4	0	R	Viterra/Proven
997 RR	OP	Roundup Ready®	2	1	0	R	Brett-Young
D3150 *	HYB	Roundup Ready®	1	1	0	MR	DuPont Canada
D3151 *	HYB	Roundup Ready®	-1	-1	0	MR	DuPont Canada
■ Rugby	OP	Roundup Ready®	1	2	0	R	SeCan
v1037 *	HYB	Roundup Ready®	-1	-1	0	R	Cargill Spec.
5020	HYB	LibertyLink®	2	1	0	R	Bayer CropScience
5030	HYB	LibertyLink®	1	2	1	R	Bayer CropScience
5440	HYB	LibertyLink®	2	2	1	R	Bayer CropScience
45P70	HYB	Clearfield®	0	1	0	R	Viterra/Proven
5505 CL *	HYB	Clearfield®	1	1	0	MR	Brett-Young

■ Protection by Plant Breeders' Rights

\* caution, first year tested and/or very limited data.

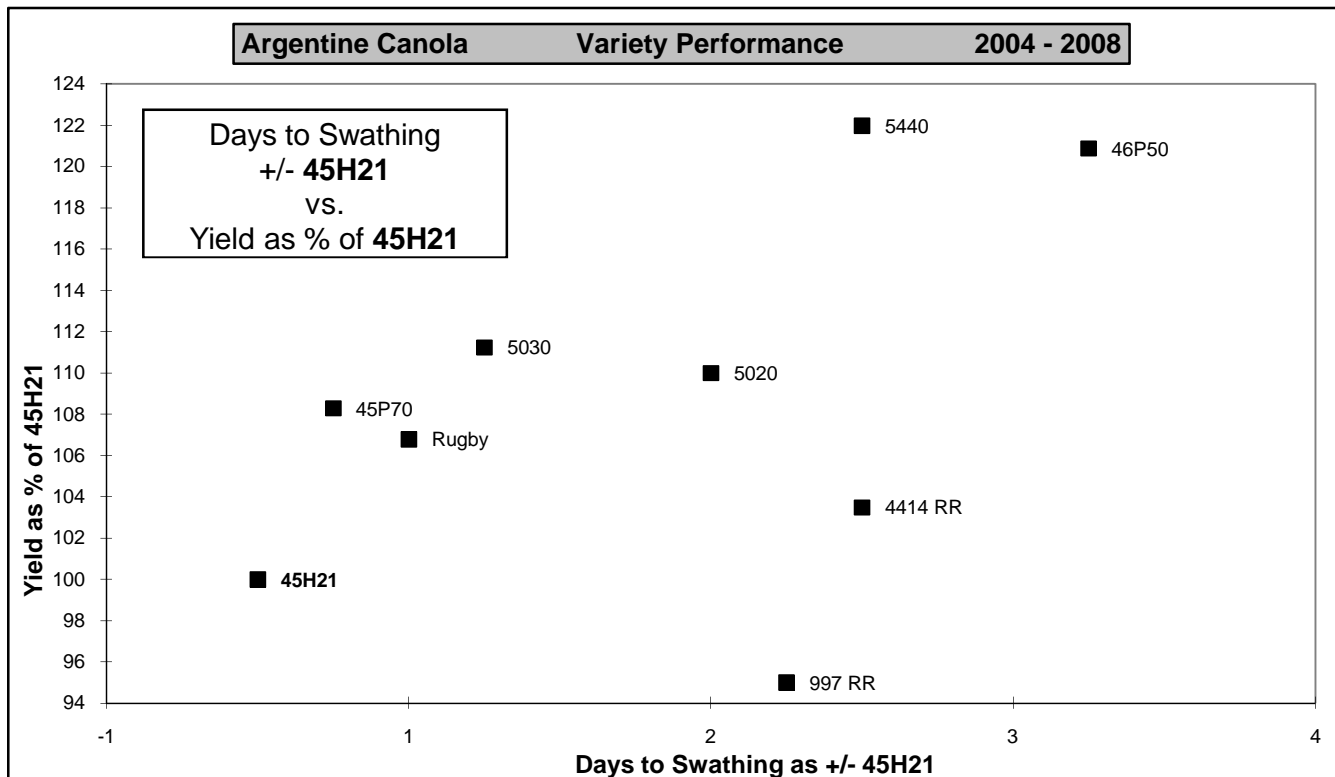
Roundup Ready® is a registered trademark of Monsanto Canada Inc.  
 LibertyLink® is a registered trademark of Bayer CropScience  
 Clearfield® is a registered trademark of BASF

R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible

OP = open pollinated, SYN = synthetic, HYB = hybrid

<sup>1</sup>Note that the "Days to swathing" data is a date as defined by the Canola Council of Canada's definition for swathing. (Maturity descriptions on page 21).

Average number of days to swathing<sup>1</sup> for 45H21 is 96 days.



Note: Above graph depicts limited data as only certain lines came from statistically stable results in 2008 due to severe drought, Thus this then limits the number of varieties that can be displayed on this "across-the-years" summary graph. For further 2008 canola data, please see data on page 25 & 26 produced from other short-season sites.

## Prairie Canola Variety Testing (PCVT) Program

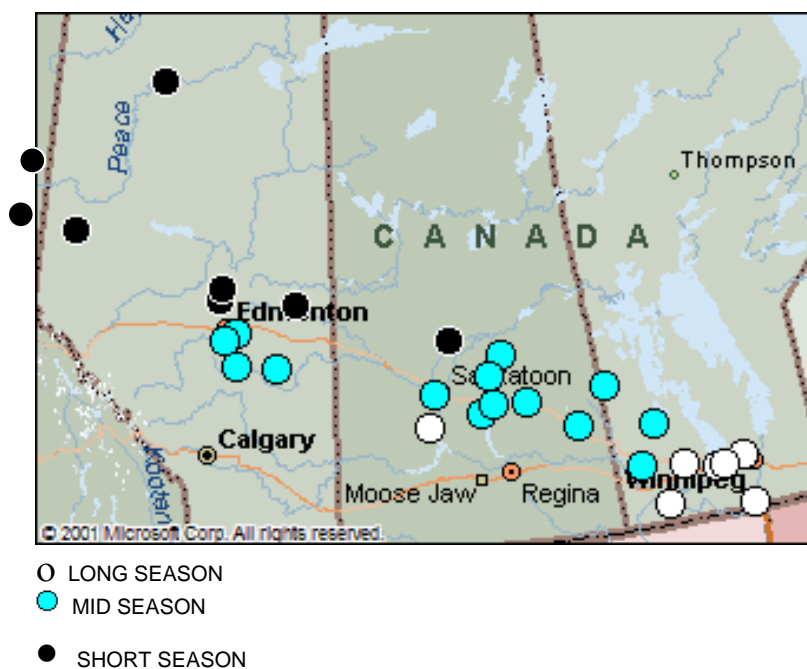
### Background Information:

The Prairie Canola Variety Testing (PCVT) program entered its sixth year in 2008. The testing system unites the provincial variety testing programs to standardize protocol and improve trial consistency and quality. Now growers can look to a single source of information on how a canola variety performed in three different zones across western Canada. The Canola Council of Canada, canola seed industry, Western Canada Canola /Rapeseed Recommending Committee, Saskatchewan Agriculture, Manitoba Agriculture Food and Rural Initiatives, Alberta Agriculture and Rural Development, Agriculture and Agri-Food Canada contributed to the development and operation of the PCVT. Trials were conducted by seed companies, government researchers and independent contractors in three growing zones across the prairies: short-, mid- and long-season zones (see map).

### Interpreting PCVT information:

Use the map to identify your zone of adaptation. For site-specific data please refer to the Canola Digest or the Canola Council of Canada website. Don't limit your search to the areas closest to you. Comparing local results to other locations with similar growing conditions can also be valuable. The table shows variety yield as a percent relative to the check variety or varieties. Although variety trials are carefully conducted, small percentage differences (e.g. <5%) in yield are usually insignificant. Least significant differences (LSD) at the bottom of the zone yield columns show what difference is needed to be 95% confident they are real and not due to chance. The table includes information on maturity, resistance to lodging, blackleg resistance, varietal type (open-pollinated, hybrid, synthetic) and herbicide tolerance. Use this information in addition to yield to choose a variety.

### 2008 PCVT Locations:



### The Canola POD:

The Canola POD, or Performance On-line Database (<http://www.canola-council.org/pod>), was developed by the Canola Council of Canada to allow farmers to explore canola performance trial results from a broad range of sources in their own area. In addition to the Prairie Canola Variety Trial results, POD provides access to private seed company performance trial information that often includes more detailed information, such as notes on site management.

The above information was provided by *Alberta Agriculture and Rural Development* and the *Canola Council of Canada*, December 2008

## 2008 Prairie-Wide Canola Variety Testing - ALL ZONE SUMMARY

Variety B. napus  (Argentine)	2006 Yield % of 46A65  All Zones Avg	2007 Yield % of 45H21, 5020  All Zones Avg	2008 Yield % of 45H21, 5020					2008 Days to Maturity				Height  +/- inches	Lodging  rating +="better"	Blackleg Rating	Organization	
			Zones (Station Years)					+/- days to 45H21, 5020 Zones								
			Short (6)	Mid (14)	Long (7)	All Zone Average	short	mid	long	All Zones						
<b>Checks</b>	Type															
45H21, 5020	Hyb		100	100	100	100	100	99 days	98 days	97 days	98 days	0	0			
<b>Conventional</b>																
46A65	OP	100	83	82	83	73	80	2	1	1	1	-2	0	R	Pioneer Hi-Bred	
<b>Clearfield</b>																
5505 CL	Hyb			92	93	89	91	3	2	2	2	3	0	MR	Brett-Young Seeds	
71-30 CL	Hyb			98	94	93	95	-1	0	0	0	1	0	R	DEKALB	
45H73	Hyb	123	98	97	100	98	99	1	1	2	1	1	0	R	Pioneer Hi-Bred	
45P70	Hyb	121	102	97	99	97	98	1	1	0	1	1	0	R	Viterra	
<b>Liberty-tolerant</b>																
5020	Hyb	127	101	106	105	107	105	-1	0	-1	0	0	0	R	Bayer CropScience	
1143 **	Hyb		98	98	98	101	99	2	1	0	1	0	0	R	Bayer CropScience	
1144 **	Hyb			107	103	108	105	0	1	0	1	0	0	MR	Bayer CropScience	
5030	Hyb	129	114	105	106	114	108	-1	0	0	0	5	1	R	Bayer CropScience	
5440	Hyb		115	109	108	115	110	1	2	1	1	4	1	R	Bayer CropScience	
8440	Hyb		107	108	106	113	108	1	1	0	1	0	1	R	Bayer CropScience	
9590	Hyb	127	107	100	106	112	106	-2	0	0	0	1	0	R	Bayer CropScience	
<b>Roundup-tolera</b>																
45H21	Hyb	120	99	94	95	93	95	1	0	1	0	0	0	R	Pioneer Hi-Bred	
4414 RR	Hyb			90	90	84	88	1	1	1	1	2	0	R	Brett-Young Seeds	
4424 RR	Hyb			92	96	83	92	3	2	1	2	4	0	MR	Brett-Young Seeds	
4434 RR	Hyb			88	90	85	88	3	2	1	2	2	0	MR	Brett-Young Seeds	
997RR	OP			89	88	84	87	2	1	1	1	1	0	R	Brett-Young Seeds	
v1037 **	Hyb			92	97	90	94	0	0	0	0	2	0	R	Cargill	
v2018 **	Hyb		96		95	92	94		2	2	2	1	0	MR	Cargill	
v2030 **	Hyb			97	88	94	94		1	1	1	2	0	MR	Cargill	
83S01 RR	Syn		91		86	85	85		0	-1	0	2	0	MR	FP Genetics	
93H01 RR	Hyb		95		95	88	93		1	1	1	2	0	MR	FP Genetics	
71-45 RR	Hyb	120		98	95	99	97	-1	-1	-1	-1	0	0	MR	DEKALB	
43E01	Hyb			90			90	-3				-3	-1	MR	Pioneer Hi-Bred	
43H57	Hyb		81	84			84	-3				-3	-1	MR	Pioneer Hi-Bred	
45H26	Hyb	126	101	99	99	98	99	1	1	0	0	1	0	R	Pioneer Hi-Bred	
45H28	Hyb			98	102	98	100	2	2	2	2	3	0	R	Pioneer Hi-Bred	
D3150	Hyb			95	97	96	96	2	2	1	1	2	0	MR	DuPont	
D3151	Hyb			94	96	93	95	1	0	0	0	0	0	MR	DuPont	
Café	OP	98	76	83	82		82	-3	-3			-3	0	R	SeCan	
Rugby	OP		89	88	89	79	86	1	1	0	1	-1	0	R	SeCan	
9553	Hyb			100	98	94	97	1	0	-1	0	1	0	R	Viterra	
9554	Hyb			96	100	102	99	1	1	0	1	2	0	MR	Viterra	
46P50	Hyb	125	103	95	99	93	96	5	3	3	3	3	0	R	Viterra	
<b>LSD (0.05) as % of check yield</b>				11	13	12										

\*\* Specialty oil

Type: OP - open pollinated; Syn - synthetic; and Hyb - hybrid

Every year British Columbia participates within the PCVT system by supplying data from two BC sites; Dawson Creek and Fort St. John. However, for production of canola data within BC there are two additional canola trials that make up our annual dataset. This has the effect of disclosing even more varieties than that offered from just the PCVT system.

In 2008, due to severe drought at both BC sites, high variability resulted in the canola data from all but one of the six trials grown (four of which are used for the PCVT system). For this reason BC data was not included into the PCVT system nor the BC dataset. Thus, the above data is provided to supply readers with information from other short-season canola data sites.

The information below was provided by *Alberta Agriculture and Rural Development* and the *Canola Council of Canada*, Dec 2008.